

IN THE CLAIMS:

1. (Currently Amended) An underfill system for filling gaps between semiconductor chips and substrates, comprising:

an air duct; and

a blower configured to blow air into said air duct,

wherein said air duct includes:

a main duct coupled to said blower, and

a plurality of sub-ducts each having an outlet being coupled to said main duct and an inlet of the sub-ducts to be disposed on one side surface of said semiconductor chip, wherein said one side surface having a first edge and a second edge, said second edge is being longer than said first edge, and configured to provide a filling material to fill said gaps between said semiconductor chips and said substrates by suction due to a pressure difference between said main duct and said sub-duct,

wherein said inlet extends along substantially the entire length of said second edge of said one side surface of said semiconductor chip.

2. (Original) The underfill system as claimed in claim 1, wherein said outlet of the sub-duct is of a smaller width than said inlet of the sub-duct.

3. (Original) The underfill system as claimed in claim 1, further comprising a valve for controlling the velocity of air blown from said blower, wherein said valve is located on said main duct between the blower and the sub-ducts.

4. (Original) The underfill system as claimed in claim 3, further comprising a timer that closes said valve to block air blown from said blower into said main duct.

5. (Original) The underfill system as claimed in claim 1, wherein said air blown from said blower is at a temperature of approximately 25°C or higher.

6. (Original) The underfill system as claimed in claim 1, wherein the blower comprises a hydraulic-type blower.

7. (Original) The underfill system as claimed in claim 1, wherein the blower comprises a fan-type blower.

8. (Original) The underfill system as claimed in claim 1, wherein the blower comprises a pneumatic-type blower.

9. (Currently Amended) A method for filling gaps between semiconductor chips and substrates using an underfill system comprising a blower structured to blow air, an air duct coupled to said blower, the air duct comprising: a main duct connected to said blower; and a plurality of sub-ducts each having an outlet being connected to said main duct and an inlet to be disposed on one side surface of said semiconductor chip, the inlet of the sub-duct forming a suction when the blower blows air in the air duct, and said one side surface having a first edge and a second edge, said second edge is being longer than said first edge, the method comprising:
mounting said semiconductor chips onto said substrates
placing one of said substrates in the suction of one of the sub-ducts; and
filling said gaps between said semiconductor chips and said substrates with a filling material from a dispenser by creating suction that draws the filling material across said gaps, the filling material provided in a direction toward the inlet of the one of the sub-ducts,
wherein said inlet extends along substantially the entire length of said second edge of said one side surface of said semiconductor chip.

10. (Original) The method of claim 9, further comprising:
blocking the flow of air along the main duct.

11. (Previously Presented) The method of claim 9, wherein creating suction comprises increasing the pressure difference between said main duct and said sub-duct.